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ABSTRACT

This study examined the relationship of ethnicity, gender, socioeconomic status (SES), age, and self-perceived academic achievement to students' academic motivational orientations. Groups of 333 American students in Wisconsin and 375 Chinese students in Hong Kong in grades 8, 10, and 12 completed questionnaires that gathered demographic information and assessed students' perceived academic achievement and factors related to their academic motivational orientations. Results indicated that American students were more likely than Chinese students to consider good grades a measure of success, while Chinese students were more likely than American students to consider behaving well as a measure of success. American students were more likely than Chinese students to rank grades as most important among measures of feedback. As they grew older, American students blamed teachers more, and Chinese students less, for their poor school performance. American students with low perceptions of their academic achievement had less preference for feedback based on comparison with fellow students than did students with high perceptions of academic achievement; the reverse was true for Chinese students. Females from both cultures considered success as more internal and controllable than did male students. American and Chinese students from high-SES homes perceived themselves as having higher academic achievement than did students from low-SES homes. Older students in both cultures were more task oriented than younger students, and students who perceived themselves as high achievers attributed greater importance to their own abilities than did students who perceived themselves as low achievers. (Contains 43 references.) (TJQ)

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Some Sociocultural Differences in Students' Academic Motivational Orientations*

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Abstract

Effects of students' sociocultural background (ethnicity, gender, and SES), age, and self-perceived academic achievement on their academic motivational orientations (meaning of success, preference for school feedback, achievement causal attributions, achievement goals) were investigated. Subjects were 333 white American students in the U.S. and 375 Chinese students in Hong Kong. All students attended the grade 8, 10 and 12 classes in Roman Catholic schools. Data were obtained using a questionnaire. Results from factor analysis, discriminant analysis, and stepwise multiple regression analysis showed considerable cultural differences in the dependent measures. Gender, SES, age, and self-perceived academic achievement effects also were observed. Students' sociocultural background, particularly cultural background, affects their academic motivational orientations and must be taken into account in order to enhance their academic performance.

Some Sociocultural Differences in Students' Academic Motivational Orientations

Researchers in the area of achievement motivation and behavior have emphasized the importance of the cultural background of the individual achievers (see, e.g., Maehr, 1978; Maehr & Nicholls, 1980; Fyans, Salili, Maehr, & Desai, 1983). Specifically, Maehr and his colleagues (see, e.g., Maehr & Nicholls, 1980, Baden & Maehr, 1986; Maehr & Braskamp, 1986) have argued that achievement motivation and behavior must be understood within the achiever's cultural context. This is because individuals from different cultures tend to attach different meanings to any given achievement situation or behavior, thereby affecting their achievement-related efforts. As a case in point, Fyans, Salili, Maehr, and Desai (1983) analyzed the semantic-differential data gathered from 30 cultural groups to determine the cross-cultural meaning of achievement. Their results showed distinctive variations in the meaning of achievement across these cultural groups in addition to a pervasive achievement theme among these groups. Their study thus provides clear evidence showing that the meaning of achievement varies from culture to culture.

In addition to an individual's cultural background, Maehr and his colleagues (see, e.g., Maehr & Braskamp, 1986) also argue that an individuals' other sociocultural characteristics, specifically gender and socioeconomic status (SES), and their age and self-perception are important variables that might affect the meaning that

individuals attach to a given achievement behavior or situation, thereby affecting their achievement strivings. In the present study, therefore, the effects of these variables on aspects of students' academic motivational orientations were examined in conjunction with the students' cultural background. Students' academic motivational orientations were examined in this study because they reflect the meanings that students attach to achievement situations in the school setting (e.g., Maehr & Braskamp, 1986).

Specific aspects of students' academic motivational orientations have been examined by researchers under a number of contexts. These include parental achievement goal orientation and "meaning of success" for their children (e.g., Ames & Archer, 1987), and the relationship between students' achievement goal orientations and their use of learning strategies in the classrooms (e.g., Ames & Archer, 1988). In one study, Ames and Archer (1987), for example, found that mothers who emphasized performance-oriented goal, or ego goal, for their children put more emphasis on getting good grades and doing better than others than mothers who emphasized a mastery-oriented goal, or task goal, for their children in school work. They were also found to be more likely to attribute their child's successful performance in school to ability. Mothers who emphasized a task goal for their children, on the other hand, were found to emphasize working hard and behaving well in school more than mothers who emphasized an ego goal for their children. They were also found to be more likely to indicate effort as the

primary reason for their children's success in school. These findings thus indicate that the "meaning of success" in school tends to differ for mothers with differing goal orientations for their children.

In another study, Ames and Archer (1988) found that students who emphasized a task goal reported using more effective learning strategies, preferred challenging tasks, had a more positive attitude toward class and had a stronger belief that success follows from one's effort than children with an ego goal. Students with an ego goal orientation, on the other hand, were found to tend to focus on their ability, evaluating their ability negatively and attributing failure to lack of ability. These findings thus indicate that children with different goal orientations in school tend to have different academic motivational orientations. These differences in academic motivational orientations reflect the different meanings that students with differing goal orientations attach to school achievement situations.

Whether students' cultural background and other sociocultural characteristics such as SES and gender were related to aspects of academic motivational orientations such as those noted above remained to be seen. The purpose of this study was therefore to determine if sociocultural variables, specifically, students' ethnicity, gender, SES, and their age and self-perceived academic achievement, were related to a number of specific measures of students' academic motivational orientations. These measures include meaning of success, preference for school feedback,

achievement causal attributions, and achievement goal orientations to be described in the Method section below.

In cross-national comparisons on academic achievement (see, e.g., McKnight, Crosswhite, Dossey, Kifer, Swafford, Travers, & Cooney, 1987; Stigler, Lee, & Stevenson, 1987; Stevenson, Stigler, Lee, Lucker, Kitamura, & Hsu, 1985), Chinese students consistently were found to outperform their American counterparts. For this and other reasons, the comparative study of Chinese and American students might prove to be interesting and profitable in understanding the social/cultural origins of motivation and achievement. It was a primary reason for this study in which the motivational orientations of students living in the U.S. and in Hong Kong were compared.

Method

Independent Variables. The independent variables in this study were students' ethnicity, gender, SES, age (i.e., grade level in school), and self-perceived academic achievement. SES was defined in terms of parental education (see Bjorklund & Weiss, 1985). Specifically, it was defined in terms of the average of mother's and father's education reported by the students. Following Ames and Archer (1988), students' self-perceived academic achievement was determined by asking them to indicate how they compared to other students in their grade level on a 7-point scale (1=one of lowest achievers; 7=one of highest achievers). It should be noted that it was impossible to administer standardized achievement tests to the students in the study because of

time, financial and other constraints. However, using self-report data has been found to be a valid practice in achievement research (see, e.g., Ames & Archer, 1987, 1988).

Participants. Students from 8th-, 10th-, and 12th-grade classes in an urban area in eastern Wisconsin and from the corresponding grades in Hong Kong were recruited for participation in the study. All participants were recruited from Roman Catholic schools because they tend to be a neglected population in research and also because studies (e.g., Coleman & Hoffer, 1987) showed that they tend to outperform their public school counterparts academically. Students in these grade levels were recruited for two main reasons. First, because they would be better able than younger students to handle the tasks at hand. The tasks were relatively sophisticated intellectually and were also entirely verbal, both of which demand the mastery of a minimum level of vocabulary and reading comprehension skills. Second, because there is reason to believe that it was at the level of about grade seven children begin to exhibit an adultlike conception of ability (see, e.g., Nicholls, 1978; Nicholls & Miller, 1984; Miller, 1985).

The American sample consisted of 333 participants. They were distributed by grade and sex as follows: Grade 8: 54 boys and 53 girls; Grade 10: 56 boys and 51 girls; Grade 12: 60 boys and 59 girls. The age of these students ranged from 13 years 1 month to 19 years 0 month with a mean of 15 years 9 months. All these participants indicated their ethnicity to be white, non-Hispanic.

The Chinese sample consisted of 375 participants. They were distributed by grade and sex as follows: Grade 8 (Form 2): 69 boys and 68 girls; Grade 10 (form 4): 66 boys and 70 girls; Grade 12 (form 6): 53 boys and 49 girls. Their age ranged from 12 years 8 months to 20 years 0 month with a mean of 15 years 8 months. These Chinese students all had English as a medium of instruction in their schools.

The mean and standard deviation of SES (1=no schooling or some elementary school; 2=completed elementary school; 3=some secondary school; 4=completed secondary school; 5=some post-secondary education; 6=completed college or university) for the Chinese sample were 2.75 and 1.33, respectively, and those for the American sample were 5.02 and .81, respectively.

Material. Each student was asked to respond anonymously to a questionnaire. The first part of the questionnaire asked students to provide demographic information about themselves (e.g., gender, age, parental education, ethnicity). The second part of the questionnaire asked the students to respond to the dependent measures.

Procedure. The study was conducted in the students' classrooms by the first author, who was previously unknown to the students. After entering the classroom, he informed the students that he worked at a university on a research project. He told the class that he had received permission from the school principal and their teacher to come to the class and ask for their help with this project. He said the project would take about half an hour of their time and that

it was important for them to work on their own without looking at others' responses. They were told that the project was concerned with finding out their thoughts and feelings about school learning. They were told that they should not write their names or make any marks on the questionnaires and their answers would be processed by a computer so that no one would know how they answered the items. Before the students started responding to the items, they were told that there were no right or wrong answers and the best answers would be those that accurately and honestly reflect their true thoughts and feelings.

Copies of the questionnaire were then distributed to the students. Their questions, if any, were answered and clarified. They were then reminded again to work on their own without looking at others' answers and that the best answers were those that accurately and honestly reflect their true thoughts and feelings.

After all the students completed their questionnaires, they were debriefed about the purpose of the study.

Dependent Measures. The dependent measures in this study have been used in previous studies (e.g., Ames & Archer, 1987, 1988; Russell, 1982). They included measures of the following aspects of academic motivational orientations: meaning of success, preference for school feedback, causal dimensions of success and failure, causal attributions of success and failure, achievement goal orientations, and self-perceived academic achievement.

Specifically, meaning of success was measured by asking students to rank order the following in terms of importance for the students themselves: getting good grades, working hard, behaving well (getting along with others and following rules), doing as well as or better than others in their class, doing better and better (showing improvement).

Preference for school feedback was measured by asking students to rank order the importance of the following information about their school performance for themselves: their grades on tests and assignments, how well they do compared to the average of their class, they are able to do better and better, how well they do compared to other students in their class, and how hard they work.

Causal dimension was measured by using the Causal Dimension Scale developed by Russell (1982). More specifically, for measuring the causal dimension for success, students were asked "When you do well in school, what do you think would be the primary cause for your success? Please write down the primary cause here." Blank spaces were provided to the students to write down this primary cause. Thereafter, they were told "Now, think about the cause you have written above. the items below are concerned with your opinion of the above cause for your success. Please circle one number for each of the following." The nine items that made up the Causal Dimension Scale developed by Russell (1982) were then provided. A similar procedure was used to measure the causal dimension for failure.

Attribution of success (failure) in school was measured by asking students to indicate how important a reason each of four attributions was for their success (failure) in school using a scale from 1 (not an important reason) to 5 (an important reason). The four attributions were: (a) you have (don't have) ability; (b) you have worked very hard (didn't work hard enough);, (c) the work was easy (difficult); and (d) the teacher did a good (poor) job.

Achievement goal orientation was measured by asking students to indicate how satisfied they were using a scale from 1 (satisfied a little) to 5 (satisfied a lot) when they: (a) learn something new; (b) get a good grade; (c) understand how to do their homework; (d) do better than other students in their class; (e) find the work easy; (f) read something interesting; (g) work on a challenging project; (h) work hard; (i) see improvement in their work; (j) please the teacher; (k) please their parents; (l) get one of the highest grades; and (m) do well without having to work hard.

Self-perceived academic achievement, as noted earlier, was measured by asking students to indicate how they compared to other students in their grade level on a 7-point scale (1=one of lowest achievers; 7=one of highest achievers).

As noted previously, these dependent measures were chosen because they reflect the meanings that students attach to achievement situations in the school setting.

Data Analysis. A number of statistical analysis strategies were used in the study. These included stepwise multiple regression analysis with the following predictor variables: gender, SES, self-perceived academic achievement, age, interaction between self-perceived academic achievement and SES, and interaction between self-perceived academic achievement and gender; and discriminant analysis with self-perceived academic achievement, gender, age, and SES as predictor variables.

Except as noted below, the data for the American (n=333) and Chinese (n=375) samples were analyzed separately.

Results

Results from the data analyses showed a number of cultural differences between American and Chinese students. In general, predictors that were found to be useful for American students were not found useful for Chinese students. Among the most interesting cultural differences between American and Chinese students are those shown in Table 1.

Insert Table 1 about here

As can be seen in Table 1, results from the chi-square test on the five measures of meaning of success for the 708 American and Chinese students showed that a significantly higher proportion of American than Chinese students ranked "getting good grades" or "doing as well as or better than

others in your class" as most important among the five measures. A significantly higher proportion of Chinese than American students, however, was found to rank "behaving well" as most important among the five measures.

Results from the chi-square test on the five measures of preference for school feedback for the 708 American and Chinese students showed that a significantly higher proportion of American than Chinese students ranked "your grades on tests and assignments" as most important among the five measures. A higher proportion of Chinese than American students, however, was found to rank "you are able to do better and better" or "how hard you work" as most important among the five measures.

Results from the stepwise multiple regression analysis and discriminant analysis showed a number of other sociocultural differences, which are summarized in Table 2.

Insert Table 2 about here

Specifically, age was found to have differential effects on American and Chinese students' attribution of failure in school to the teacher in the regression analysis. For American students, the older they became, the <u>more</u> they attributed their failure in school to their teacher doing a poor job. For Chinese students, on the other hand, the opposite is true: the older Chinese students became, the <u>less</u> they attributed their failure in school to their teacher doing a poor job (item 1 in Table 2).

Results from the discriminant analysis showed that self-perceived academic achievement had differential effects on American and Chinese students' preference for school feedback that would indicate how well they do compared to other students in their class. American students who perceived themselves to be higher achievers tended to have greater preference for this form of feedback while those who perceived themselves to be lower achievers tended to have less preference for this form of feedback. For Chinese students, on the other hand, the opposite is true. Specifically, Chinese students who perceived themselves to be higher achievers were found to have less preference for this form of school feedback while those who perceived themselves to be lower achievers tended to have greater preference for this form of feedback (item 2 in Table 2).

In contrast to the above cultural differences, the following results were obtained for <u>both</u> American and Chinese students.

Results from the stepwise multiple regression analyses showed the following:

Male students were found to perceive their primary cause of success as less controllable and internal while female students were found to perceive their primary cause of success as more controllable and internal (item 3 in Table 2; Note: This was measured by a scale emerging from the factor analysis of the items for the Causal Dimension Scales with a Cronbach's alpha of .70 and .60 for American and Chinese students, respectively). Also, male students

were found to attribute less importance while female students were found to attribute more importance to lack of effort as an important reason for their failure in school in both cultures (item 4 in Tabe 2).

Students from higher SES homes were found to perceive themselves as having higher academic achievement while those from lower SES homes were found to perceive themselves as having lower academic achievement in both cultures (item 5 in Table 2).

Results from the discriminant analyses showed that as students of both cultures became older, they tended to become more task-oriented in the sense that they became increasingly concerned with doing better and better (item 6 in Table 2). Results from stepwise multiple regression analysis, however, showed that students became less concerned with their social solidarity goal as they became older (item 7 in Table 2; Note: The social solidarity goal was measured by a scale emerging from the factor analysis of the achievement goal orientation items. This social solidarity goal scale had a Cronbach's alpha of .69 and .68 for American and Chinese students, respectively).

Also, multiple regression analysis showed that students of both cultures who perceived themselves to be higher achievers attributed greater importance while those who perceived themselves to be lower achievers attributed less importance to their ability as an important reason for their success in school (item 8 in Table 2).

Discussion

Cultural Differences

As noted in Table 1, a significantly higher proportion of American than Chinese students ranked "getting good grades" or "doing as well as or better than others in your class" as most important among the five measures of meaning of success. A significantly higher proportion of Chinese than American students, however, was found to rank "behaving well" as most important among the five measures. A significantly higher proportion of American than Chinese students was found to rank "your grades on tests and assignments" as most important among the five measures of preference for school feedback, but a higher proportion of Chinese than American students was found to rank "you are able to do better and better" or "how hard you work" as most important among the five measures.

The exact reasons as to why the cultural differences occurred in these measures of meaning of success and preference for school feedback between American and Chinese students are not immediately clear. One may speculate, however, that these cultural differences may be attributed to differences in cultural values and practices experienced by students between these two cultures. As many writers (e.g., Chen & Uttal, 1988; Ho, 1981; Lum & Char, 1985; Stevenson, Lee, Chen, Lummis, Stigler, Fan, & Ge, 1990; Huang, 1976) have noted, the Chinese culture traditionally has emphasized the importance of education. Education is considered important by the Chinese because it is

fundamental to their belief in human malleability and is an important means of self-cultivation or self-improvement, which is an important Chinese cultural value (see, e.g., Chen & Uttal, 1988; Ho, 1981). Chinese children are taught from an early age on that good behavior, studying hard, and a high level of educational achievement are an important form of self-improvement. They are taught that one's ultimate level of achievement is attained through one's efforts and they thus learn that improving their school performance is within their control (Chen & Uttal, 1988; Hess, Chang, & McDevitt, 1987). Chinese parents set high standards of academic achievement for their children and believe that teachers are more important than parents in influencing their children's academic performance (Chen & Uttal, 1988; Stevenson, Lee, Chen, Lummis, Stigler, Fan, & Ge, 1990). This emphasis on effort, self-improvement, and the role of the teacher probably helps to explain why Chinese children are more likely to choose "behaving well" as most important among the five measures of meaning of success and "you are able to do better and better" or "how hard you work" as most important among the five measures of preference for school feedback.

The finding on the effects of age on American and Chinese students' attribution of failure in school indicates that American students tend to blame their teachers more for their poor performance in school as they grow older. Chinese students, on the other hand, tend to blame their teachers less for their poor performance in school as they become

older. This finding is reminiscent of that of Hess, Chang, and McDevitt (1987). These researchers found that Caucasian American mothers tended to assign greater weight to poor school training than Chinese mothers in explaining their children's poor school performance.

In one cross-cultural study conducted by Stevenson and his colleagues (Stigler, Lee, & Stevenson, 1987), American teachers were found to be leaders of their children's activities in the classroom far less often than their Chinese counterparts (46% vs. 90% of the time). They were found to spend far less time imparting information on their students in the classrooms than their Chinese counterparts (25% vs. 63% of the time). In another cross-cultural study focusing on homework, Chen and Stevenson (1989) found that American teachers assigned a very low rating (mean rating of 4.4 out of 9) for the value of homework, putting it second from last among 16 items (e.g., drill, teacher's availability, physical punishment). They also found that Chinese students were assigned more homework by their teachers than American students and they also liked doing their homework more than their American counterparts. The researchers suggested that it might be the quality of the homework assignment for the American students that led to their poorer attitudes toward homework.

Given these findings, one might speculate that perhaps it is such considerations as the role of the teacher in the classroom and the quality of the homework assignment that led to the present finding, namely, the older the American

students, the more they attributed their failure in school to the poor work of their teacher. Perhaps further research should be conducted to examine this conjecture.

One educational implication of the present finding is that it is important to help students recognize that attributing one's failure to the failing of others rather than oneself may be counterproductive. This is because looking for scapegoats rather than ways for improving oneself is not likely to lead to future success. This means that students should be taught to take reasonable responsibility for their failures in school rather than blaming teachers. Only when students recognize that they must take responsibility for their failure can they be expected to show improved school performance. This cultural difference in attribution of failure to the teacher thus might be one reason why Chinese students have been found to consistently outperform their American counterparts in achievement tests (see, e.g., Chen & Uttal, 1988).

The finding that the older the Chinese students, the less they attributed their failure in school to the poor work of the teacher probably reflects the influence of Chinese cultural values. As previously noted (see, e.g., Chen and Uttal, 1988), Chinese children are taught from an early age on that studying hard and a high level of educational achievement are an important form of self-improvement, which is an important Chinese cultural value. They are taught that one's ultimate level of achievement is attained through one's efforts and they thus learn that

improving their school performance is within their control. Chinese parents set high standards of academic achievement for their children and believe that teachers are more important than parents in influencing their children's academic performance. This emphasis on effort, self-improvement, and the role of the teacher thus probably helps to explain why Chinese children are less likely to attribute their failure in school to their teacher doing a poor job as they become older.

An alternative interpretation of this finding can be suggested, however. Given the traditionally important role ascribed to teachers in the Chinese culture (see, e.g., Liu, 1979; Ho, 1981), one may speculate that Chinese students become more hesitant to question the importance of the teacher as they get older. Furthermore, the present finding for the Chinese may also reflect the Chinese cultural value of humility. According to this cultural value, a humble person in a failure situation would tend to be self-deprecating and attribute his failure to internal causes (e.g., lack of ability) rather than external causes such as poor teaching on the part of the teacher (see, e.g., Bond, Leung, & Wan, 1982). Given that humility is a virtue valued in the Chinese culture, the present finding also may reflect the influence of this cultural value. Perhaps further research may be undertaken to address this issue.

For both American and Chinese students, it was found that students' self-perceived academic achievement is a significant predictor for their preference for school

feedback in the form of how well they do compared to other students in their class. However, American students with lower self-perceived academic achievement were found to tend to emphasize comparing with other students in their class less. Chinese students with lower self-perceived academic achievement, on the other hand, were found to tend to emphasize comparing with other students in their class more. The finding for American students is understandable given that social comparison is ego-threatening for those doing poorly in school. This tendency for American students with lower self-perceived academic achievement to de-emphasize social comparison thus may be considered a rational thing to do and a way of self-preservation. The finding for Chinese students, on the other hand, may reflect their preoccupation with achievement strivings rather than ego-threat. Further, it may indicate one way in which Chinese students with lower self-perceived academic achievement attempt to improve themselves, namely, by means of feedback from social comparisons. The educational implication of this finding is that while information based on social comparison may not be useful for low-achieving American students, it might be of importance to low-achieving Chinese students in order to help them improve their school performance. This finding, along with those discussed earlier, thus supports the notion of Maehr and his colleagues (e.g., Maehr, 1978; Maehr & Nicholls, 1980; Maehr & Braskamp, 1986) that the meaning of a given achievement situation depends on the cultural background of the individual students.

Gender Differences

As noted previously, gender was found to be a significant predictor for the attribution of failure in school to lack of effort for both American and Chinese students. Specifically, it was found that males tended to attribute less while females tended to attribute more importance to lack of effort as a reason for failure in school. This finding is thus consistent with the general finding of sex differences on attributions reported in the literature. The present finding is noteworthy, however, in that it is based on both American and Chinese students, and the finding thus provides cross-cultural evidence on sex differences in causal attributions of failure.

In the present study, gender also was found to be a significant predictor for the controllability/causality subscale of the Causal Dimension Scale for success attributions for both ethnic groups. As noted earlier, the present finding showed a tendency for males to perceive success as less and females to perceive success as more controllable and internal. This finding seems to agree with that of Eccles, Adler and Meece (1984) and suggests that females tend to be more adaptive than males in success strivings. In their study on the math and English performance of 8th- through 10th-grade students, Eccles, Adler, and Meece (1984) found little support for the learned-helplessness pattern of attributions for achievement behavior for females reported in the literature. The learned-helplessness pattern of attributions is

characterized by attributing both success and failure to external and uncontrollable causes. As just described, the finding from the present study does not support this position. Because the students in the study by Eccles, Adler, and Meece (1984) and in this study were of secondary school age (grade 8 and up) while the students in studies showing learned-helplessness patterns of attributions were of other age levels (see, e.g., Dweck & Reppucci, 1973; Nicholls, 1975; Stipek, 1984) and also because of differences in the tasks used, it is possible that the learned-helplessness pattern of attributions might be a function of both the age of students and the specific tasks at hand. Perhaps further investigations may be conducted to address this issue.

SES Difference

In the present study, it was found that students, both American and Chinese, of higher SES tended to perceive themselves as having higher academic achievement while those of lower SES tended to perceive themselves as having lower academic achievement. This finding is consistent with the findings of Harnisch (1987), who found SES to be a significant predictor of school achievement for students in his analysis of the High School and Beyond data from 18,684 public high school sophomore students.

Although it is well documented that higher SES students tend to have higher academic achievement than lower SES students (see, e.g., Levine, 1979; Levine & Havighurst, 1984), the present finding is unique on two counts. First,

it is unique because the focus was on students' subjective judgment of their academic achievement. Second, it is unique because this effect of SES was found from a cross-cultural sample of American and Chinese students rather than a culturally homogeneous sample.

The present finding may be a reflection of the greater achievement expectation and pressure placed on the higher SES students by their parents, thereby leading to the higher self-perceived academic achievement on the part of these students. Thus, for example, Good and Brophy (1990) noted that parents who are themselves well educated generally tend to value education, expect their children to be well-educated, and show interest in their children's progress. Similarly, Mussen, Conger, and Kagan (1974) noted that middle-class parents place greater emphasis than lower-class parents on motivation for intellectual achievement among their children and offer them greater encouragement and reward for academic progress. Likewise, McCandless (1967) noted that such values as belief in intellect before emotion, hard work and self-discipline, and faith in learning for learning's sake are supported more by middle-class than by lower-class adults. It is thus possible that students' self-perception of academic achievement is a reflection of these parental pressures and support.

The present finding on the effect of SES on self-perceived academic achievement also may reflect SES difference in achievement motivation and self-esteem. Higher SES students were found to show higher achievement

motivation (Rosen, 1959) and higher self-esteem than lower SES students (Rosenberg, 1965). It is thus conceivable that it is higher achievement motivation and higher self-esteem that leads to higher self-perceived academic achievement.

Taken together, these findings suggest that it might be parental values, beliefs, behaviors, students' achievement motivation, self-esteem, and the fact that higher SES students tend to have higher actual academic achievement than lower SES students (see, e.g., Levine, 1979; Levine & Havighurst, 1984) that contribute to the higher self-perceived academic achievement of students from higher SES.

Moreover, the present finding may also reflect the idea of Good and Brophy (1990), who noted a greater likelihood of higher SES students to be confident, eager to participate in schoolwork and responsive to challenge. It is perhaps because of considerations such as these that SES exerts its influences on students, thereby causing those from higher SES to have higher actual as well as perceived academic achievement. The implication is thus to search for ways to help lower SES students to become more confident, more eager to participate in schoolwork, and to be more responsive to academic challenge. To accomplish this, perhaps the emphasis should be on restructuring students' educational environment, as suggested by Maehr and his colleagues (e.g., Baden & Maehr, 1986; Maehr & Braskamp, 1986).

Age Differences

For the measure of meaning of success "doing better and better," age was found to be a significant predictor for

students of both cultures. Specifically, it was found that there is a tendency for older students of both cultures to ascribe more importance and younger students of both cultures to ascribe less importance to doing better and better. Since concern with doing better and better, that is, improvement, is generally considered an important aspect of a task-goal orientation (see, e.g., Ames & Archer, 1987, 1988), this finding suggests that as students, both American and Chinese, become older, they tend to become more task-oriented in their goal orientation.

It should be noted, however, that in the present study age was not found to predict task-goal orientation as measured by the task-goal subscale from the achievement goal orientation items for either American or Chinese students. This finding is a challenge to conduct further research to ascertain the relationship between age and task-goal orientation among students.

Another interesting age difference that was found for both American and Chinese students in this study pertains to the social solidarity goal orientation. The findings showed that as students, both American and Chinese, became older, they tended to become less socially oriented in their achievement goal orientation. This finding corroborates the results of a study with a sample of 11-to-17-year-olds (Richmond, 1985). In that study, it was found that as students became older, their home and school affiliation declined. The present finding also is consistent with the common observation that as children become adolescents, they

strive to become increasingly independent of adults in their daily activities (see, e.g., Dusek, 1987).

It is interesting to note here that Maehr (Maehr & Braskamp, 1986) theorizes that as adults age, they would become less concerned with ego or task goals but more concerned with social solidarity goal. This theorizing together with the present finding and the finding of Richmond (1985) seems to suggest that the relationship between age and the concern with social solidarity may be a curvilinear one, depending on the particular age level of the individuals.

It should be noted that data supporting this theorized curvilinear relationship between age and social solidarity goal is almost nonexistent. Perhaps a longitudinal study may be undertaken to determine if this theorized curvilinear relationship indeed exists, and, if so, what it's exact nature is.

Achievement Differences

The present study also found that for both American and Chinese students, the higher their self-perceived academic achievement, the greater they attributed their success in school to their ability. This finding is consistent with those reported in the literature (see, e.g., Nicholls, 1979; Bar-Tal, 1978) and is hardly surprising since attributing success to ability is ego-enhancing for the students (see, e.g., Zuckerman, 1979). Given that the present finding was obtained from a cross-cultural rather than a culturally homogeneous sample, the indication is that attribution of

academic success to ability transcends cultural boundaries. Perhaps further research can be done to ascertain the extent to which this attribution is universal.

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Table 1

Some Cultural Differences Between American And Chinese Students

Measure	American (n=333)	Chinese (n=375)	Chi-Square[a]
Meaning of Success			
Getting good grades	46%	32%	15.06***
Doing as well as or better than others in your class	18%	9%	4.34*
Behaving well	8%	22%	27.52***
Preference for School Feedback			
Your grades on tests and assignments	51%	31%	31.34***
You are able to do better and better	16%	29%	17.29***
How hard you work	25%	33%	5.73*

[a] $df=1$, $N=708$.

*$p < .05$. ***$p < .001$.

Table 2

Some Significant Findings for American and Chinese Students

Measure	Predictor	Statistics	American (n=333)	Chinese (n=375)
1 Attributing failure to poor job of teacher	Age	Beta[c]	.24***	-.24***
2 How well you do compared to other students in your class	Ach.[a]	Lambda[d]	.96**	.96**
3 Perceiving primary cause of success as controllable and internal	Gender[b]	Beta	-.14**	-.14**
4 Attribution of failure to lack of effort	Gender	Beta	-.11*	-.10*
5 Self-perceived academic achievement	SES	Beta	.27***	.16**
6 Doing better and better	Age	Lambda	.94***	.95***
7 Social solidarity goal	Age	Beta	-.20***	-.18***
8 Attribution of success to ability	Ach.	Beta	.32***	.10*

[a]Ach.: Self-perceived academic achievement.

[b]Gender: Male=1, Female=0.

[c]Beta: Beta weight from stepwise multiple regression analysis.

[d]Lambda: Wilk's Lambda from discriminant analysis.

*$p < .05$. **$p < .01$. ***$p < .001$.